CCHD-957
Ultra-Low Phase Noise Oscillator
with Standby Mode

CRYSTEK CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

CCHD-957 Model
9×14 mm SMD, **3.3V, HCMOS**

RoHS Compliant

22.5792 MHz HCMOS 3.3V

-97 dBc/Hz

24.576 MHz HCMOS 3.3V

-170 dBc/Hz

45.1584 MHz HCMOS 3.3V

-100 dBc/Hz

49.152 MHz HCMOS 3.3V

-169 dBc/Hz

Hear The Difference!!
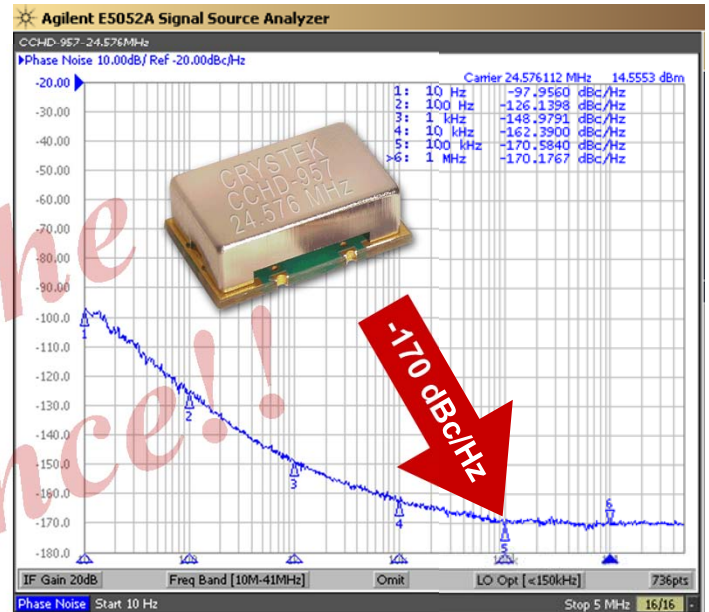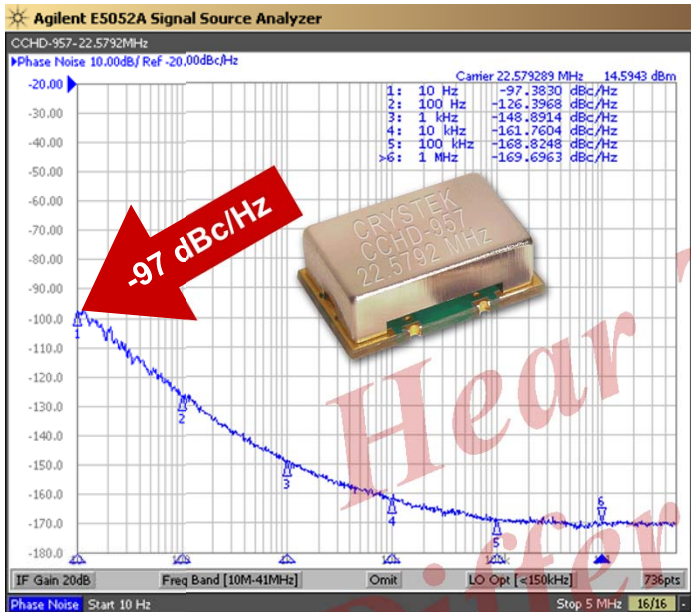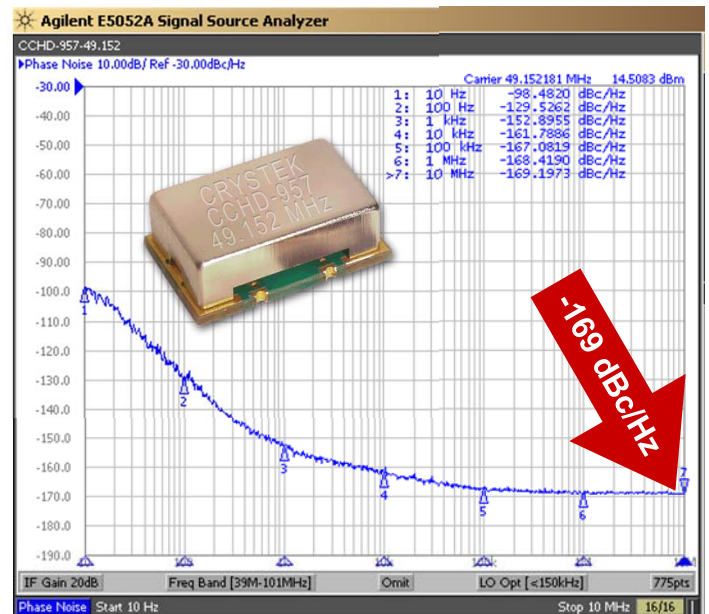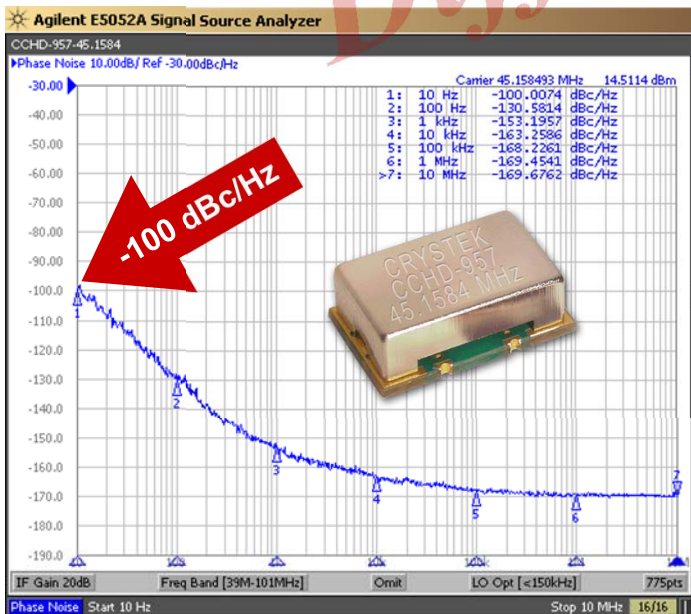
Crystek's Model CCHD-957 HCMOS CLOCK oscillator family has been designed specifically for High Definition Audio (HD Audio). It features a typical low close-in phase noise of -100 dBc/Hz @ 10 Hz offset, and a noise floor of -169 dBc/Hz. With this extreme low phase noise performance, you will "Hear the Difference". It also features a "Standby Function", that is, when placed in disable mode, the internal oscillator is completely shut down in addition to its output buffer being placed in Tri-State. This family is housed in a 9×14 mm SMT package and operates with a +3.3V power supply.

Applications include: Digital Audio Broadcasting (DAB)
Professional CD audio equipment
DACs and ADCs for HD audio

Rev: K
Date: 03-Mar-2020
Page 1 of 2

CCHD-957 Model
9×14 mm SMD, **3.3V, HCMOS**

RoHS Compliant

Frequency Range:	**10 MHz to 50 MHz**
Temperature Range:	**0°C to +70°C**
(Option M)	**-20°C to +70°C**
(Option X)	**-40°C to +85°C**
Storage:	**-45°C to 90°C**
Input Voltage:	**3.3V ±0.3V**
Input Current:	**15mA Typical, 25mA Max**
Input Current (Disabled Mode):	**1.5mA Max**
Output:	**HCMOS**
Symmetry:	**45/55% Max @ 50%Vcc**
Rise/Fall Time:	**3ns Max @ 20% to 80% Vcc**
Logic:	**"0" = 10% Vcc Max**
	"1" = 90% Vcc Min
Load:	**15pF**
Output Current:	**±24mA Max**
Disable Time:	**200ns Max**
Start-up Time:	**1ms Typical, 2ms Max**
Pin 1 Disable Current:	**-350µA Max**
Phase Noise:	**-100 dBc/Hz Typical, -95 dBc/Hz Max at 10Hz offset**
Phase Noise Floor:	**-169 dBc/Hz Typical, -165 dBc/Hz Max**
Sub-harmonics:	**None**
Aging:	**<3ppm 1st year, <1ppm thereafter**
CCHD-957 Options:	
Temperature Range:	**0°C to +70°C (±20ppm, ±25ppm, ±50ppm)**
	-20°C to +70°C (±25ppm, ±50ppm)
	-40°C to +85°C (±25ppm, ±50ppm)

Part Number Example:
CCHD-957X-25-49.152 = 3.3V, 45/55, -40°C to +85°C (±25ppm), 49.152 MHz

Mechanical:

Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J

Environmental:

Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004

Developed Frequencies

10.000 MHz	24.576 MHz	40.000 MHz
20.000MHz	25.000 MHz	45.1584 MHz
22.5792 MHz	27.000 MHz	49.152 MHz
24.000 MHz	28.000 MHz	

CRYSTEK CORPORATION
MADE IN THE USA

Top View

0.560 (14.2)
0.360 (9.14)

CRYSTEK
CCHD-957
Frequency
Date Code

Side View

0.560 (14.2)
0.210 (5.3)

RECOMMENDED REFLOW SOLDERING PROFILE
900034 (See App Note listed on website)
http://www.crystek.com/specification/reflow/900034.pdf

Bottom View

0.040 (1.01)
1   2
0.070 (1.77)
4   3
0.200 (5.08)

SUGGESTED PAD LAYOUT

0.050 (1.27)
0.090 (2.28)
0.280 (7.11)
0.200 (5.08)

Tri-State/Standby Function	
Function pin 1	Output pin
Open	Active
"1" level 0.7×Vcc Min	Active
"0" level 0.3×Vcc Max	High Z

Pad	Connection
1	E/D
2	GND
3	OUT
4	Vcc

PAD FINISH: Immersion Gold (ENIG); 5 micro inches maximum

Rev: K
Date: 03-Mar-2020
Page 2 of 2

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Standard Clock Oscillators *category:*

Click to view products by Crystek *manufacturer:*

Other Similar products are found below :

601252 F335-25 F535L-33.333 F535L-50 ECS-2018-160-BN-TR MXO45HS-2C-66.6666MHZ SiT1602BI-22-33E-50.000000E SiT8209AI-32-33E-125.000000 SIT8918AA-11-33S-50.000000G SM4420TEV-40.0M-T1K F335-24 F335-40 F535L-10 F535L-12 F535L-16 F535L-24 F535L-27 F535L-48 PE7744DW-100.0M CSX-750FCC14745600T ASF1-3.686MHZ-N-K-S XO57CTECNA3M6864 ECS-2100A-147.4 601251 EP16E7E2H26.000MTR SIT8918AA-11-33S-16.000000G XO3003 9120AC-2D2-33E212.500000 9102AI-243N25E100.00000 8208AC-82-18E-25.00000 ASDK2-32.768KHZ-LR-T3 8008AI-72-XXE-24.545454E 8004AC-13-33E-133.33000X AS-4.9152-16-SMD-TR ASFL1-48.000MHZ-LC-T SIT8920AM-31-33E-25.0000 DSC1028DI2-019.2000 9121AC-2C3-25E100.00000 9102AI-233N33E100.00000X 9102AI-233N25E200.00000 9102AI-232H25S125.00000 9102AI-133N25E200.00000 9102AC-283N25E200.00000 9001AC-33-33E1-30.000 3921AI-2CF-33NZ125.000000 5730-1SF PXA000010 8003AI-12-33S-40.00000Y 1602BI-13-33S-19.200000E 8208AI-2F-18E-25.000000X